

August 28, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19H0562

Re: Daily

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 15 sample(s) on 8/9/2019 11:15:00AM for the analyses presented in the following report as Work Order 19H0562.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.



Carey Gadzala
Project Manager

WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, August 28, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Daily
Lab Order: 19H0562

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H0562-01	011-Composite	011	08/08/2019 06:00	8/9/2019 11:15:00AM
19H0562-02	011-Grab	011	08/08/2019 06:00	8/9/2019 11:15:00AM
19H0562-03	001-Composite	001	08/08/2019 11:15	8/9/2019 11:15:00AM
19H0562-04	001-Grab	001	08/08/2019 11:15	8/9/2019 11:15:00AM
19H0562-05	031-Grab	031	08/09/2019 06:40	8/9/2019 11:15:00AM
19H0562-06	Mixed Liquor-Grab	Mixed Liquor	08/09/2019 06:42	8/9/2019 11:15:00AM
19H0562-07	J-Box-Grab	J-Box	08/09/2019 06:38	8/9/2019 11:15:00AM
19H0562-08	WWII-Grab	WWII	08/09/2019 07:20	8/9/2019 11:15:00AM
19H0562-09	Coldwell-Grab	Coldwell	08/09/2019 07:50	8/9/2019 11:15:00AM
19H0562-10	RSB FT Overflow-Grab	RSB FT Overflow	08/09/2019 08:15	8/9/2019 11:15:00AM
19H0562-11	RSB FT Influent-Grab	RSB FT Influent	08/09/2019 08:16	8/9/2019 11:15:00AM
19H0562-12	999-Grab	999	08/09/2019 08:00	8/9/2019 11:15:00AM
19H0562-13	BFTC-Grab	BFTC	08/09/2019 08:20	8/9/2019 11:15:00AM
19H0562-14	002-Grab	002	08/08/2019 08:27	8/9/2019 11:15:00AM
19H0562-15	WAL-Grab	WAL	08/09/2019 08:34	8/9/2019 11:15:00AM

Field Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order:	19H0562
Client Project:	Daily		
Client Sample ID:	011-Grab	Work Order/ID:	19H0562-02
Sample Description:	011	Sampled:	08/08/2019 06:00
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	7.8	pH Units

Client Sample ID:	001-Grab	Work Order/ID:	19H0562-04
Sample Description:	001	Sampled:	08/08/2019 11:15
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	7.8	pH Units

Client Sample ID:	J-Box-Grab	Work Order/ID:	19H0562-07
Sample Description:	J-Box	Sampled:	08/09/2019 06:38
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	8.4	pH Units

Client Sample ID:	RSB FT Overflow-Grab	Work Order/ID:	19H0562-10
Sample Description:	RSB FT Overflow	Sampled:	08/09/2019 08:15
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	9.0	pH Units

Client Sample ID:	999-Grab	Work Order/ID:	19H0562-12
Sample Description:	999	Sampled:	08/09/2019 08:00
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	8.3	pH Units

Client Sample ID:	002-Grab	Work Order/ID:	19H0562-14
Sample Description:	002	Sampled:	08/08/2019 08:27
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	8.5	pH Units

Client Sample ID:	WAL-Grab	Work Order/ID:	19H0562-15
Sample Description:	WAL	Sampled:	08/09/2019 08:34
Matrix:	Aqueous	Received:	08/09/2019 11:15

Analyses	Result	Units
pH	8.8	pH Units

CASE NARRATIVE**Date:** *Wednesday, August 28, 2019***Client:** Arcelor Mittal USA, Inc.**Project:** Daily**Lab Order:** 19H0562

Report has been reissued to include NH4 for Outfall 011 per the clients request. 8/28/19

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-01
Client Project:	Daily	Sampled:	08/08/2019 6:00
Client Sample ID:	011-Composite	Received:	08/09/2019 11:15
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
Prep Date/Time: 08/22/2019 04:56									
Nitrogen, Ammonia (As N)	ei	A	0.22	0.054	0.10		mg/L	1	08/22/2019 10:42

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-03
Client Project:	Daily	Sampled:	08/08/2019 11:15
Client Sample ID:	001-Composite	Received:	08/09/2019 11:15
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
Prep Date/Time: 08/09/2019 11:39									
Nitrogen, Ammonia (As N)	ei	A	0.42	0.054	0.10		mg/L	1	08/09/2019 13:57

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-05
Client Project:	Daily	Sampled:	08/09/2019 6:40
Client Sample ID:	031-Grab	Received:	08/09/2019 11:15
Sample Description:	031		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: SM 5210 B-2001				Analyst: EF			
Prep Date/Time: 08/09/2019 15:42										
Biochemical Oxygen Demand										
Biochemical Oxygen Demand	ejj	A	ND	2.0	2.0	U	mg/L	1	08/14/2019 23:39	
			Method: SM 2540 D-1997				Analyst: KMT			
Prep Date/Time: 08/09/2019 11:38										
Total Suspended Solids										
Total Suspended Solids	ejj	A	3.6	1.0	1.0		mg/L	1	08/09/2019 13:16	

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-06
Client Project:	Daily	Sampled:	08/09/2019 6:42
Client Sample ID:	Mixed Liquor-Grab	Received:	08/09/2019 11:15
Sample Description:	Mixed Liquor		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed		
			Method: SM 2540 F-1997				Analyst: DAT				
										Prep Date/Time: 08/09/2019 11:46	
Settleable Solids											
Settleable Solids	i	A	270	1.0	1.0		ml/L	1	08/09/2019 11:46		
			Method: SM 2540 D-1997				Analyst: KMT				
Total Suspended Solids											
Total Suspended Solids	ejj	A	2300	1.0	1.0		mg/L	1	08/09/2019 13:16		

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-07
Client Project:	Daily	Sampled:	08/09/2019 6:38
Client Sample ID:	J-Box-Grab	Received:	08/09/2019 11:15
Sample Description:	J-Box		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 350.1 Rev 2.0				Analyst: ABG			
Prep Date/Time: 08/09/2019 11:39										
Nitrogen, Ammonia as N										
Nitrogen, Ammonia (As N)	ei	A	0.17	0.054	0.10		mg/L	1	08/09/2019 13:59	
			Method: EPA 420.4 Rev 1.0				Analyst: ABG			
Prep Date/Time: 08/09/2019 11:39										
Total Phenolics										
Phenolics, Total Recoverable	ejj	A	0.015	0.0060	0.010		mg/L	1	08/09/2019 15:19	
			Method: SM 2540 D-1997				Analyst: KMT			
Prep Date/Time: 08/09/2019 11:38										
Total Suspended Solids										
Total Suspended Solids	ejj	A	13	1.0	1.0		mg/L	1	08/09/2019 13:16	

Analytical Results

Date: Wednesday, August 28, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-08
Client Project:	Daily	Sampled:	08/09/2019 7:20
Client Sample ID:	WWII-Grab	Received:	08/09/2019 11:15
Sample Description:	WWII		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
			Prep Date/Time: 08/09/2019 11:39						
Total Cyanide									
Cyanide, Total	ejj	A	0.013	0.0020	0.0050		mg/L	1	08/09/2019 16:41

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-09
Client Project:	Daily	Sampled:	08/09/2019 7:50
Client Sample ID:	Coldwell-Grab	Received:	08/09/2019 11:15
Sample Description:	Coldwell		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
Total Recoverable Metals by ICP									
						Prep Date/Time: 08/11/2019 09:38			
Lead	ejj	A	0.14	0.0033	0.0075		mg/L	1	08/12/2019 15:58
Zinc	ejj	A	0.66	0.0073	0.020		mg/L	1	08/12/2019 15:58
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide									
						Prep Date/Time: 08/09/2019 11:39			
Cyanide, Total	ejj	A	0.022	0.0020	0.0050		mg/L	1	08/09/2019 16:43
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
						Prep Date/Time: 08/09/2019 11:39			
Nitrogen, Ammonia (As N)	ei	A	42	0.54	1.0		mg/L	1	08/09/2019 14:06
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
						Prep Date/Time: 08/09/2019 11:38			
Total Suspended Solids	ejj	A	130	1.0	1.0		mg/L	1	08/09/2019 13:16

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-10
Client Project:	Daily	Sampled:	08/09/2019 8:15
Client Sample ID:	RSB FT Overflow-Grab	Received:	08/09/2019 11:15
Sample Description:	RSB FT Overflow		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
Total Recoverable Metals by ICP									
			Prep Date/Time: 08/11/2019 09:38						
Lead	ejj	A	0.16	0.0033	0.0075		mg/L	1	08/12/2019 16:03
Zinc	ejj	A	0.44	0.0073	0.020		mg/L	1	08/12/2019 16:03
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
			Prep Date/Time: 08/09/2019 11:39						
Nitrogen, Ammonia (As N)	ei	A	6.1	0.054	0.10		mg/L	1	08/09/2019 14:09
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
			Prep Date/Time: 08/09/2019 11:38						
Total Suspended Solids	ejj	A	170	1.0	1.0		mg/L	1	08/09/2019 13:16

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-11
Client Project:	Daily	Sampled:	08/09/2019 8:16
Client Sample ID:	RSB FT Influent-Grab	Received:	08/09/2019 11:15
Sample Description:	RSB FT Influent		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: SM 2540 D-1997				Analyst: KMT			
Total Suspended Solids										
Prep Date/Time: 08/09/2019 11:38										
Total Suspended Solids	ejj	A	760	1.0	1.0		mg/L	1	08/09/2019 13:16	

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-12
Client Project:	Daily	Sampled:	08/09/2019 8:00
Client Sample ID:	999-Grab	Received:	08/09/2019 11:15
Sample Description:	999		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/09/2019 11:38									
Total Suspended Solids	ejj	A	6.7	1.0	1.0		mg/L	1	08/09/2019 13:16

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-13
Client Project:	Daily	Sampled:	08/09/2019 8:20
Client Sample ID:	BFTC-Grab	Received:	08/09/2019 11:15
Sample Description:	BFTC		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/09/2019 11:38									
Total Suspended Solids	ejj	A	52	1.0	1.0		mg/L	1	08/09/2019 13:16

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0562-15
Client Project:	Daily	Sampled:	08/09/2019 8:34
Client Sample ID:	WAL-Grab	Received:	08/09/2019 11:15
Sample Description:	WAL		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/09/2019 11:38									
Total Suspended Solids	ejj	A	5.2	1.0	1.0		mg/L	1	08/09/2019 13:16

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)

**Revised**
8/28/2019

QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler



Revised
8/28/2019

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

Chain of Custody

ArcelorMittal Burns Harbor/Microbac Labs

Friday

Lab Work No: 19H0562

* Date Obtained: 8-9-19

** Sample Date: 8-8-19

Location	Time	Sampler	Type	Preserved	Cooled	Containers			Parameters	Comments
						Type	Qty	Vol. (ml)		
011 **	06:00	[Signature]	Comp	No	Yes	Glass	1	4000		01
			Grab	No	No	Plastic	1	125	pH	02
001 **	06:20	[Signature]	Comp	No	Yes	Glass	1	4000	NH3	03
			Grab	No	No	Plastic	1	125	pH	04
031 *	06:40	[Signature]	Grab	No	No	Plastic	1	1000	TSS	05
			Grab	No	No	Plastic	1	1000	BOD	↓
Mixed Liquor *	06:42	[Signature]	Grab	No	No	Plastic	1	2000	TSS, Settling	06
J-Box *	06:38	[Signature]	Grab	No	No	Glass	2	1000	NH3, Phenol, TSS, pH	07
DIW-131 *	NA	[Signature]	Grab	No	No	Plastic	1	125	pH	X
WWII *	07:20	[Signature]	Grab	No	No	Plastic	1	1000	Cn	08
Coldwell	07:50	[Signature]	Grab	No	No	Plastic	2	2000	NH3, CN, Pb, Zn, TSS	09
RSB FT Overflow *	08:15	[Signature]	Grab	No	No	Plastic	2	1000	NH3, pH, TSS, Pb, Zn	10
RSB FT Influent *	08:16	[Signature]	Grab	No	No	Plastic	1	500	TSS	11
BFTD *	SD	[Signature]	Grab	No	No	Plastic	1	500	TSS	X
999 *	08:00	[Signature]	Grab	No	No	Plastic	1	500	TSS, pH	12
BFTC *	08:20	[Signature]	Grab	No	No	Plastic	1	500	TSS	13
002 **	08:27	[Signature]	Grab	No	No	Plastic	1	125	pH	14
WAL 1 **	08:39	[Signature]	Grab	No	No	Glass	1	1000	TSS, pH	15
WAL 2 **	SD	[Signature]	Grab	No	No	Glass	1	1000	TSS, pH	X
WAL 3 **	08:39	[Signature]	Grab	No	No	Glass	1	1000	TSS, pH	X
SWTP *	NA	[Signature]	Grab	No	No	Plastic	10	1000	TSS	X

*** WPL is for previous sample date

**** Sample collected by Water Process personnel

No CMgt HM_s

Relinquished by: [Signature]
 Received by: [Signature]

Date: 8-9-19
 Date: 8/9/19

Time: 08:45
 Time: 0845

Env 5x Rev. 14 07/01/16 (TEK)

19H0562 Carey Gadzala
 ArcelorMittal - Burns Harbor, IN
 Daily
 08/09/2019



Microbac Laboratories, Inc. - Chicagoland Division

**Total Residual Chlorine - Amperometric Titration - SM Method 4500-ClE - 2000
for Arcelor Mittal - Burns Harbor**

Date/Time: 8/8/19 0820
 Analyst: PAO
 pH Paper Lot #: HJ626
 LCS ID: A9074

STD ID / Lot #
 KI Solution: 146367
 Acetate buffer: 129216
 PAO Titrant: 145348

Exp. Date
6/30/19
10/11/19
5/31/26

Sample ID	Sample Vol. (mL)	pH (pH Units)	Titrant Start (mL)	Titrant Stop (mL)	Titrant Vol. (mL)	Result (mg/L)
Blank	200	4.0	0.00	0.00	0.00	0.00
LCS		4.0		0.04	0.04	0.04
Outfall 001		4.0		0.00	0.00	0.00
Outfall 002		4.0		0.00	0.00	0.00
Outfall 003		4.0		0.00	0.00	0.00
Outfall 011						
Outfall 011 Dup						
Outfall 603 Dup		4.0	✓	0.00	0.00	0.00

Date/Time: 8/9/19 0800
 Analyst: PAO
 pH Paper Lot #: HJ626
 LCS ID: A9074

STD ID / Lot #
 KI Solution: 146367
 Acetate buffer: 129216
 PAO Titrant: 145348

Exp. Date
6/30/19
10/11/19
5/31/20

Sample ID	Sample Vol. (ml)	pH (pH Units)	Titrant Start (ml)	Titrant Stop (ml)	Titrant Vol. (ml)	Result (mg/L)
Blank	200	4.0	0.00	0.00	0.00	0.00
LCS		4.0		0.02	0.02	0.02
Outfall 001		4.0		0.00	0.00	0.00
Outfall 002		4.0		0.00	0.00	0.00
Outfall 003		4.0		0.00	0.00	0.00
Outfall 011						
Outfall 011 Dup						
Outfall 601 Dup		4.0	✓	0.00	0.00	0.00

Chlorine, mg/L = (Titrant Vol., mL) (200 mL) / (Sample Vol., mL)

revision: a_01_2016

